

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☐ REENTER 1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other 1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No.
2. Name of Operator		9. API Well No. 30-043-21507
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
13. State		
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- | | |
|---|---|
| 1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM. |
|---|---|

25. Signature	Name (Printed/Typed)	Date
Title		
Approved by (Signature)	Name (Printed/Typed)	Date
Title		
Office		

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)



DISTRICT I

1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 748-0720

DISTRICT II

811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III

1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-043-21507	² Pool Code 42289	³ Pool Name LYBROOK GALLUP OIL POOL
⁴ Property Code 325271	⁵ Property Name VENADO CANYON UNIT	⁶ Well Number 514H
⁷ OGRID No. 371838	⁸ Operator Name DJR OPERATING, LLC	⁹ Elevation 6941'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	01	22N	06W		938'	SOUTH	389'	WEST	SANDOVAL

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	12	22N	06W		2323'	SOUTH	330'	EAST	SANDOVAL

¹² Dedicated Acres PENETRATED SPACING UNIT;
SEC 1: SW/SW & SE/SW (80 AC.); SEC 12:
NE/NW, NW/NE, SW/NE, SE/NE & NE/SE
(200 AC.) = 280 ACRES

¹³ Joint or Infill

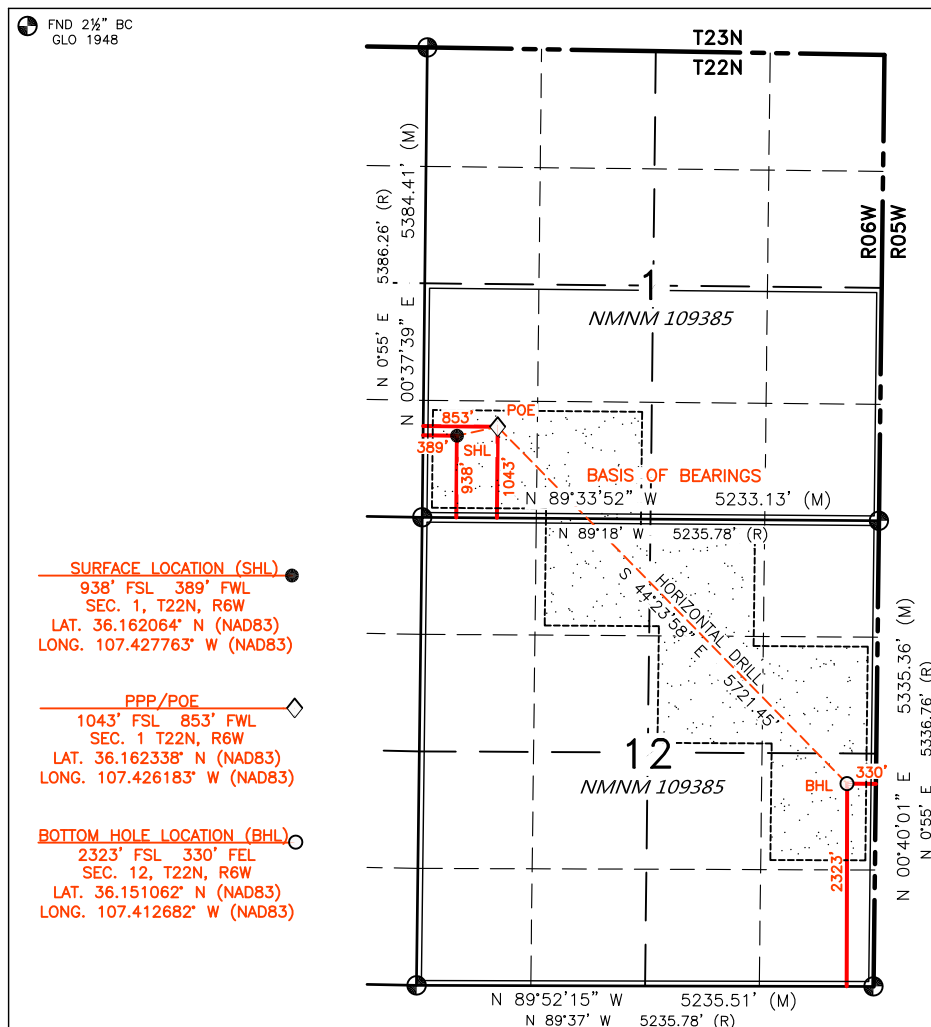
¹⁴ Consolidation Code

¹⁵ Order No.

R-14067 R-14067A

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

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17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Shaw-Marie Ford 01/19/22
Signature Date

Shaw-Marie Ford
Printed Name

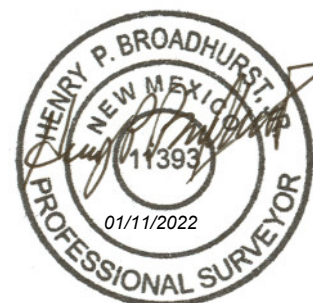
sford@djrlc.com
E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JUNE 1, 2021

Date of Survey
Signature and Seal of Professional Surveyor:



Certificate Number 11393

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: DJR Operating, LLC **OGRID:** 371838 **Date:** 09 / 29 / 2022

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Venado Canyon Unit 101H	TBD	M-01-22N-06W	930 FSL x 370 FWL	400	590	140
Venado Canyon Unit 513H	TBD	M-01-22N-06W	922 FSL x 352 FWL	340	260	120
Venado Canyon Unit 514H	TBD	M-01-22N-06W	938 FSL x 389 FWL	300	230	110

IV. Central Delivery Point Name: Chaco Processing Plant [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Venado Canyon Unit 101H	TBD	02/16/2023	02/27/2023	03/17/2023	03/27/2023	03/29/2023
Venado Canyon Unit 513H	TBD	02/17/2023	02/28/2023	03/18/2023	03/28/2023	03/29/2023
Venado Canyon Unit 514H	TBD	02/18/2023	02/29/2023	03/19/2023	03/29/2023	03/29/2023

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan**EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: <i>Shaw-Marie Ford</i>
Printed Name: Shaw-Marie Ford
Title: Regulatory Specialist
E-mail Address: sford@djrlc.com
Date: 09/29/2022
Phone: 505-716-3297
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
Venado Canyon Unit 101H, 513H and 514H
SWSW M-01-22N-06W

SEPARATION EQUIPMENT

DJR Operating, LLC (DJR) has pulled representative pressurized samples from wells in the same producing formation. DJR has utilized these samples in process simulations to determine the amount of gas anticipated in each stage of the process and utilized this information with a safety factor to size the equipment listed below:

Separation equipment will be set as follows:

- Individual 3 phase separator will be set for the individual well.
- The separator will be sized based on the anticipated volume of the well and the pressure of the lines utilized for oil, gas, and water takeaway.
- The 3 phase production separator will be equipped with a 0.75 MMBtu/hr indirect fired heater.

Heater treaters will be set as follows:

- Individual heater treaters will be set for the individual well.
- The heater treaters are sized based on the anticipated combined volume of oil and produced water predicted to come from the initial 3 phase separator.
- Oil will be separated from the produced water and the oil/produced water will be sent to its respective tanks.
- The combined oil and natural gas stream is routed to the Vapor Recovery Tower.

Vapor Recovery Equipment will be set as follows:

- The Vapor Recovery Tower has been sized, based on the anticipated volume of gas from the heater treater and oil and water tanks.
- The Vapor Recovery Unit has been sized, based on the anticipated volume of gas from the heater treater and oil and water tanks. The Vapor Recovery Unit is utilized to push the recovered gas into the sales pipeline.

Production storage tanks will be set as follows:

- The oil and produced water tanks utilize a closed vent capture system to ensure all breathing, working, and flashing losses are routed to the Vapor Recovery Tower and Vapor Recovery Unit.
- Each of the production storage tanks will be equipped with a 0.5 MMBtu/hr indirect heater.



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
Venado Canyon Unit 101H, 513H and 514H
SWSW M-01-22N-06W

VENTING and FLARING

DJR Operating, LLC (DJR) has a natural gas system available prior to startup of completion operations. DJR utilizes a Vapor Recovery Unit System and sells all natural gas except during periods of startup, shutdown, maintenance, or malfunction for the gas capturing equipment, including the vapor recovery tower, vapor recovery unit, storage tanks, and pipelines.

Currently, DJR utilizes the following from list A-I of Section 3 for its operations to minimize flaring:

- a) DJR utilizes natural gas-powered generators to power its leases where grid power isn't available.
- b) When electrical grid power is unavailable, natural gas generators will be used for major equipment onsite.
- c) DJR's in service compression will be natural gas powered.
- d) Should liquids removal, such as dehydration be required, units will be powered by natural gas.

DJR will only flare gas during the following times:

- Scheduled maintenance for gas capturing equipment including:
 - Vapor Recovery Tower
 - Vapor Recovery Unit
 - Storage tanks
 - Pipelines
 - Emergency flaring



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
Venado Canyon Unit 101H, 513H and 514H
SWSW M-01-22N-06W

OPERATIONAL PRACTICES

19.15.27.8 A. Venting and Flaring of Natural Gas

DJR Operating, LLC (DJR) understands the requirements of NMAC 19.15.27.8 which states that the venting and flaring of natural gas during drilling, completion or production that constitutes waste as defined in 19.15.2 are prohibited.

19.15.27.8 B. Venting and flaring during drilling operations

- DJR shall capture or combust natural gas if technically feasible during drilling operations using best industry practices.
- A flare stack with a 100% capacity for expected volumes will be set on location of the facility at least 100 feet from the nearest surface hole location, well heads, and storage tanks.
- In the event of an emergency, DJR will vent natural gas in order to avoid substantial impact. DJR shall report the vented or flared gas to the NMOCD.

19.15.27.8 E. Venting and flaring during completion or recompletion operations

During Completion Operations, DJR utilizes the following:

- DJR facilities are built and ready from day 1 of Flowback.
- Individual well test separators will be set to properly separate gas and liquids. Temporary test separator will be utilized initially to process volumes. In addition, separators will be tied into flowback tanks which will be tied into the gas processing equipment for sales down a pipeline. See Separation Equipment for details.
- Should the facility not yet be capable of processing gas, or the gas does not meet quality standards, then storage tanks will be set that are tied into gas busters or temporary flare to manage natural gas. This flare would meet the following requirements:
 - 1) An appropriately sized flare stack with an automatic igniter.
 - 2) DJR analyzes the natural gas samples twice per week.
 - 3) DJR routes the natural gas into a gathering pipeline as soon as the pipeline specifications are met.
 - 4) DJR provides the NMOCD with pipeline specifications and natural gas data.



19.15.27.8 D. Venting and flaring during production operations

During Production Operations DJR will not vent or flare natural gas except under the following circumstances:

1. During an emergency or malfunction
2. To unload or clean-up liquid holdup in a well to atmospheric pressure, provided:
 - a. DJR does not vent after the well achieves a stabilized rate and pressure.
 - b. DJR will remain present on-site during liquids unloading by manual purging and take all reasonable actions to achieve a stabilized rate and pressure at the earliest practical time.
 - c. DJR will optimize the system to minimize natural gas venting on any well equipped with a plunger lift or auto control system.
 - d. Best Management Practices will be used during downhole well maintenance.
3. During the first year of production from an exploratory well provided:
 - a. DJR receives approval from the NMOCD.
 - b. DJR remains in compliance with the NM gas capture requirements.
 - c. DJR submits an updated C-129 form to the NMOCD.
4. During the following activities unless prohibited:
 - a. Gauging or sampling a storage tank or low-pressure production vessel.
 - b. Loading out liquids from a storage tank.
 - c. Repair and maintenance.
 - d. Normal operation of gas activated pneumatic controller or pump.
 - e. Normal operation of a storage tank but not including venting from a thief hatch.
 - f. Normal operation of dehydration units.
 - g. Normal operations of compressors, compressor engines, turbines, valves, flanges, and connectors.
 - h. During a bradenhead, packer leakage test, or production test lasting less than 24-hours.
 - i. When natural gas does not meet the gathering pipeline specifications.
 - j. Commissioning of pipelines, equipment, or facilities only for as long as necessary to purge introduced impurities.

19.15.27.8 E. Performance standards

1. DJR has utilized process simulations with a safety factor to design all separation and storage equipment. The equipment is routed to a Vapor Recovery System and utilizes a flare as back up for periods of startup, shutdown, maintenance, or malfunction of the VRU System.
2. DJR will install a flare that designed to handle the full volume of vapors from the facility in case of the VRU failure and it is designed with an auto ignition system.
3. Flare stacks will appropriately sized and designed to ensure proper combustion efficiency.



- a. Flare stacks installed or replaced will be equipped with an automatic ignitor or continuous pilot.
 - b. Previously installed flare stacks will be retrofitted with an automatic ignitor, continuous pilot, or technology that alerts DJR of flare malfunction within 18 months after May 25, 2021.
 - c. Flare stacks replaced after May 25, 2021, will be equipped with an automatic ignitor or continuous pilot if located at a well or facility with average daily production of 60,000 cubic feet of natural gas or less.
 - d. Flare stacks will be located at least 100 feet from the well and storage tanks and securely anchored.
4. DJR will conduct an AVO inspection on all components for leaks and defects on a weekly basis.
 5. DJR will make and keep records of AVO inspections which will be available to the NMOCD for at least 5 years.
 6. DJR may use a remote or automated monitoring technology to detect leaks and releases in lieu of AVO inspections with prior NMOCD approval.
 7. Facilities will be designed to minimize waste.
 8. DJR will resolve emergencies as promptly as possible.

19.15.27.8 F. Measurement or estimation of vented and flared natural gas

1. DJR will have meters on both the low- and high-pressure sides of the flares and the volumes will be recorded in DJR's SCADA system.
2. DJR will install equipment to measure the volume of flared natural gas that has an average daily production of 60,000 cubic feet or greater of natural gas.
3. DJR's measuring equipment will conform to the industry standards.
4. The measurement system is designed such that it cannot be bypassed except for inspections and servicing meters.
5. DJR will estimate the volume of vented or flared natural gas using a methodology that can be independently verified if metering is not practicable due to low flow rate or pressure.
6. DJR will estimate the volume of flared and vented natural gas based on the results of an annual GOR test for wells that do not require measuring equipment reported on Form C-116.
7. DJR will install measuring equipment whenever the NMOCD determines that metering is necessary.



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
Venado Canyon Unit 101H, 513H and 514H
SWSW M-01-22N-06W

BEST MANAGEMENT PRACTICES

DJR Operating, LLC (DJR) utilizes the following Best Management Practices to minimize venting during active and planned maintenance.

DJR has a closed vent capture system to route emissions from the heater treater, tanks, and vapor recovery to the vapor recovery unit with an enclosed combustion device (ECD) for backup. The system is designed such that if the vapor recovery unit is taken out of service for any reason, the vapors will be routed to the ECD for combustion.

DJR will isolate and attempt to route all vapors to the vapor recovery unit or ECD prior to opening any lines for maintenance to minimize venting from the equipment.

DJR shall notify the NMOCD of venting or flaring that exceeds 50 MCF but less than 500 MCF in volume that either resulted from an emergency or malfunction, or an event lasting over eight hours or more cumulatively within any 24-hour period from a single event by filing a form C-129 no later than 15 days following the discovery or commencement of venting or flaring.

DJR shall notify the NMOCD verbally or by e-mail within 24-hours following discovery or commencement of venting or flaring that exceeds 500 MCF in volume or otherwise qualifies as a major release as defined in 19.15.29.7 NMAC from a single event and provide the information required in form C-129 to the NMOCD no later than 15 days that verifies, updates, or corrects the verbal or e-mail notification.

DJR will install measuring equipment to conform to industry standards such as American Petroleum Institute (API) Manual of Petroleum Measurement Standards (MPMS) Chapter 14.10 Measurement of Flow to Flares.

DJR's measuring equipment shall not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

DJR shall report the volume of vented and flared natural gas for each well or facility at which venting or flaring occurred on a monthly basis.

Rev 0



DRILLING PLAN

Venado Canyon #514H

Sandoval County, New Mexico

Surface Location

389-ft FWL & 938-ft FSL
 Sec 1 T22N R06W
 Graded Elevation 6941' MSL
 RKB Elevation 6955' (14' KB)

SHL Geographical Coordinates (NAD-83)

Latitude 36.1620640° N
 Longitude 107.4277630° W

Kick Off Point for Horizontal Build Curve

4247-ft MD
 4212-ft TVD

Local Coordinates (from SHL)

509-ft North
 24-ft West

Heel Location (Pay zone entry)

853-ft FWL & 1043-ft FSL
 Sec 1 T22N R06W

Heel Geographical Coordinates (NAD-83)

Latitude 36.16233828° N
 Longitude 107.42618262° W

Bottom Hole Location (TD)

330-ft FEL & 2323-ft FSL
 Sec 12 T22N R06W

BHL Geographical Coordinates (NAD-83)

Latitude 36.151062° N
 Longitude 107.4126820° W

Well objectives

This well is planned as a 5720-ft lateral in the Mancos Silt sand.

Bottom Hole temperature and pressure

The temperature in the Mancos Silt horizontal objective is 136°F. Bottom hole pressure in the Mancos Silt is forecast to be 1985 psi.

Formation Tops (Sd = Sand; Sh = Shale; Siltstone = Slt, Coal = C; W = water; O = oil; G = gas; NP = no penetration)

Name	MD (ft)	TVD (ft)	Lithology	Pore fluid	Expected Pore Pressure (ppg)	Planned Mud Weight (ppg)
Ojo Alamo	1337	1331	Sd	W	8.3	8.4 – 8.8
Kirtland	1436	1429	Sh	-	8.3	8.4 – 8.8
Fruitland	1639	1630	C	G	8.3	9.0 - 9.5
Pictured Cliffs	1842	1831	Sd	W	8.3	9.0 - 9.5
Lewis	1948	1936	Sh	-		9.0 - 9.5
Chacra	2704	2684	Sd	-	8.3	9.0 - 9.5
Menefee	3413	3386	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	4131	4096	Sd	-	8.3	9.0 - 9.5
Mancos	4274	4238	Sh	-		9.0 - 9.5
Mancos Silt	4646	4594	Slt	O/G	6.6	9.0 - 9.5
Gallup A	NP	NP	Slt	O/G	6.6	9.0 - 9.5
Gallup B	NP	NP	Sd	O/G	6.6	8.8 - 9.0
Gallup C	NP	NP	Sd	O/G	6.6	8.8 - 9.0
Target	5318	4913	Sd	O/G	6.6	8.8 - 9.0

Casing Program

Casing OD	Hole Size	Weight (#/ft)	Grade	Coupling	MD Top	MD Bottom	TVD Top	TVD Bottom	Top of Cement
9-5/8"	12-1/4"	36	K-55	STC	surf	350	surf	350	surface
7"	8-3/4"	26	K-55	LTC	surf	5260	surf	4911	surface
4-1/2"	6-1/8"	11.6	P-110	BTC	4980	11039	4827	4892	4980

Note: all casing will be new

Rev 0



Casing Design Load Cases

		Casing String		
Description		9-5/8" Surface	7" Intermediate	4-1/2" Production Liner
Collapse	Full internal evacuation ¹	✓	✓	✓
	Cementing	✓	✓	✓
Burst	Pressure test	✓ ²	✓ ²	✓
	Gas kick		✓ ³	
	Fracture at shoe, 1/3 BHP at surface		✓ ⁴	
	Injection down casing			✓ ⁵
Axial	Dynamic load on casing coupling ⁶	✓	✓	✓
Axial	Overpull ⁷	✓	✓	✓

Note

- 1 Fluid level at shoe, air column to surface, pore pressure outside
- 2 Tested to 80% of minimum internal yield with freshwater inside, pore pressure outside
- 3 50 bbl kick at TD, 0.50 ppg intensity, 4" drill pipe, 9.0 ppg mud, fracture gradient at shoe
- 4 2060 psi BHP, 687 psi surface pressure, 12.5 ppg EMW shoe integrity
- 5 Surface stimulation pressure of 8000 psi on 8.3 ppg fluid column. Stimulation will be down frac string, so load does not apply to 7" intermediate casing.
- 6 Shock load from abrupt pipe deceleration, evaluated against coupling rating
- 7 Overpull values as follows: Surface casing 20,000 lbs, Intermediate & Production 100,000 lbs

Casing Design Factors

		Design Factors			
Casing string	Casing OD	Burst	Collapse	Axial	Triaxial
Surface	9-5/8"	1.25	13.38	8.16	1.56
Intermediate	7"	1.25	1.50	1.68	1.34
Production liner	4-1/2"	1.37	3.68	1.88	1.69

Cement Design

9-5/8" Surface Casing

	Lead
Name	Redi-Mix
Type	I-II
Planned top	Surface
Density (ppg)	14.50
Yield (cf/sx)	1.61
Mix water (gal/sx)	7.41
Volume (sx)	114
Volume (bbls)	33
Volume (cu. ft.)	185
Excess %	50

7" Intermediate Casing

	Lead	Tail
	BJ Services	BJ Services
Type	III	Poz/G
Planned top	Surface	3747-ft
Density (ppg)	12.30	13.50
Yield (cf/sx)	2.34	1.50
Mix water (gal/sx)	13.26	7.20
Volume (sx)	363	242
Volume (bbls)	151	64
Volume (cu.ft.)	850	362
Excess %	55	55



Rev 0

4-1/2" Production Liner

	BJ Services
Type	Poz/G
Planned top	4980-ft
Density (ppg)	13.3
Yield (cf/sx)	1.56
Mix water (gal/sx)	7.71
Volume (sx)	509
Volume (bbls)	142
Volume (cu.ft)	795
Excess %	40

Wellhead & Pressure Control

The well head will be an 11" 5M multi-bowl system. A 3M BOPE conforming to Onshore Order #2 will be installed on the surface casing. The BOP and accumulator will meet API 16D and 16E respectively.

A PVT mud monitoring system and a trip tank will be rigged up and operational for all hole intervals. An electronic geolograph will be employed to monitor and record drilling data (ROP, WOB, SPM, Pressure, RPM and torque).

Mud Program

Surface hole will be drilled with a fresh water, native mud system. In intermediate hole, a low weight 7% KCl LSND drilling fluid will be used, with KCl providing chemical stability for the young shales and clays present in the interval. In production hole a LSND system with polymer and lubricant additives is programmed. Sufficient drill water and mud additives will be on hand to maintain adequate pit volumes and maintain well control.

Hole Section	Fluid type	Interval (MD)	Density (ppg)	Funnel Viscosity	Yield Point	Fluid Loss (cc/30 min)
Surface	Fresh water spud mud	0 – 350	8.4 – 8.8	32 – 44	2 – 12	NC
Intermediate	7% KCl Low solids, non-dispersed	350 – 5260	9.0 – 9.5	38 – 45	8 – 14	<20
Production	Low solids, non-dispersed	5260 – 11039	8.8 – 9.2	34 – 38	6 – 8	6 – 8

Cores, tests and logs

Wellbore surveying: Drift (inclination only) surveys will be obtained in surface hole. MWD directional surveys will be taken in intermediate and production hole.

Logging while drilling: None in surface hole. MWD GR in intermediate and production hole.

Mud logging: a two-person mud logging unit with C1 – C4 gas analysis will be operational in intermediate and production hole.

Electric logging: No open hole electric logs are programmed. A cased hole GR/CCL will be run during completions for perforating depth control.

Cuttings and drilling fluids management

A closed loop, steel tank-based circulating system will be used. In addition to the rig solids control equipment, a dewatering centrifuge and chemical flocculation system will be operational to strip solids from the whole mud. All solids will be collected in 3-sided bins and will then be put into transports with a bucket loader. Drying agents will be used if necessary. The solids will be taken to a licensed commercial disposal facility. Whole mud will be dewatered back to drill water and used as make up for subsequent wells or hauled off for disposal. A diagram of the closed loop system is included.

Completion

It is envisioned that this well will be completed with a multi-stage sand frac, using the plug and perf technique. After drilling out the plugs, the current plan is to install a 2-7/8" plunger-assisted gas lift tubing string. The stimulation and completion plan will be sundried at a later date.



Company: DJR Operating
Project: Venado Canyon Unit
Site: M01 2206 Pad
Well: # 514H
Wellbore: Original drilling
Design: APD

PROJECT DETAILS: Venado Canyon Unit

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Western Zone
System Datum: Mean Sea Level
Local North: True



WELL DETAILS: # 514H

GL 6941' & RKB 14' @ 6955ft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0	0	1878538.05	2842808.63	36.16206400	-107.42776300

Plan: APD (# 514H/Original drilling)

Created By: Janie Collins Date: 17:28, May 18 2021

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
514H Heel Rev 1	4913	100	467	1878639.85	2843274.71	36.16233828	-107.42618262
514H Toe	4892	-4005	4452	1874552.04	2847277.64	36.15106200	-107.41268200

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0	0.00	0.00	0	0	0	0.00	0.00	0	
460	0.00	0.00	460	0	0	0.00	0.00	0	
869	8.18	357.29	867	29	-1	2.00	357.29	-20	
4247	8.18	357.29	4212	509	-24	0.00	0.00	-358	
5318	90.21	135.84	4913	100	467	9.00	138.24	280	514H Heel Rev 1
11039	90.21	135.84	4892	-4005	4452	0.00	0.00	5988	514H Toe



Azimuths to True North
Magnetic North: 8.18°

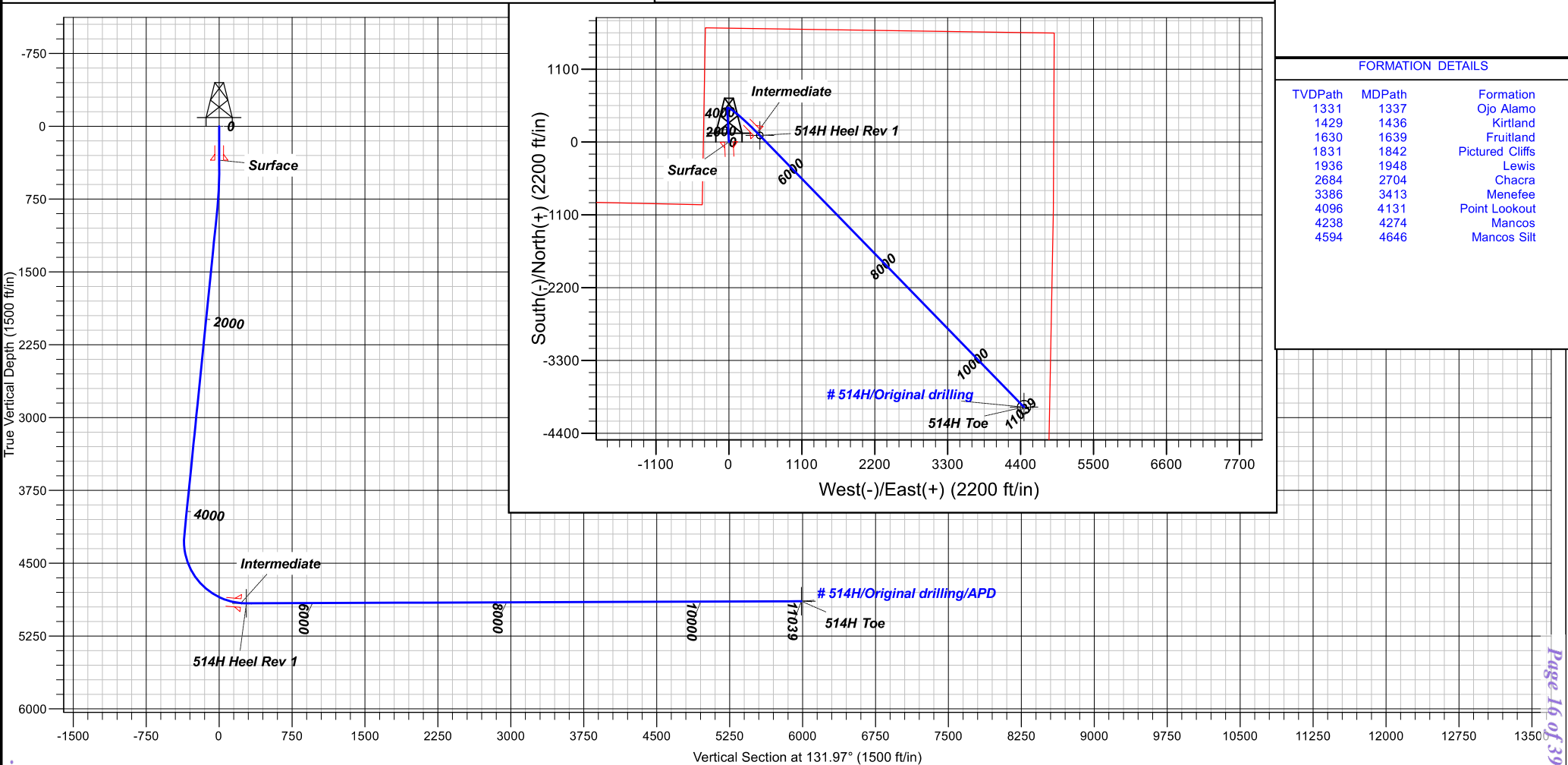
Magnetic Field
Strength: 49355
Dip Angle: 62.83°
Date: 2/17/2021
Model: IGRF2015

CASING DETAILS

TVD	MD	Name
350	350	Surface
4911	5260	Intermediate

FORMATION DETAILS

TVDPath	MDPath	Formation
1331	1337	Ojo Alamo
1429	1436	Kirtland
1630	1639	Fruitland
1831	1842	Pictured Cliffs
1936	1948	Lewis
2684	2704	Chacra
3386	3413	Menefee
4096	4131	Point Lookout
4238	4274	Mancos
4594	4646	Mancos Silt





DJR Operating

Venado Canyon Unit

M01 2206 Pad

514H - Slot 3

Original drilling

Plan: APD

Standard Planning Report

18 May, 2021





Lonestar Consulting, LLC
Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well # 514H - Slot 3
Company:	DJR Operating	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Project:	Venado Canyon Unit	MD Reference:	GL 6941' & RKB 14' @ 6955ft
Site:	M01 2206 Pad	North Reference:	True
Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original drilling		
Design:	APD		

Project	Venado Canyon Unit		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	M01 2206 Pad		
Site Position:		Northing:	1,878,522.25 usft
From:	Lat/Long	Easting:	2,842,771.80 usft
Position Uncertainty:	0 ft	Slot Radius:	13.20 in
		Latitude:	36.16202100
		Longitude:	-107.42788800
		Grid Convergence:	0.24 °

Well	# 514H - Slot 3		
Well Position	+N/-S	16 ft	Northing: 1,878,538.06 usft
	+E/-W	37 ft	Easting: 2,842,808.63 usft
Position Uncertainty	0 ft	Wellhead Elevation:	Latitude: 36.16206400
			Longitude: -107.42776300
			Ground Level: 6941 ft

Wellbore	Original drilling				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/17/2021	8.68	62.86	49,355.84576553

Design	APD			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0	0	0	131.97

Plan Survey Tool Program	Date	5/18/2021		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0	11,039	APD (Original drilling)	MWD+IGRF
				OWSG MWD + IGRF or WMM

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0	0.00	0.00	0	0	0	0.00	0.00	0.00	0.00	
460	0.00	0.00	460	0	0	0.00	0.00	0.00	0.00	
869	8.18	357.29	867	29	-1	2.00	2.00	0.00	357.29	
4247	8.18	357.29	4212	509	-24	0.00	0.00	0.00	0.00	
5318	90.21	135.84	4913	100	467	9.00	7.66	12.95	138.24	514H Heel Rev 1
11,039	90.21	135.84	4892	-4005	4452	0.00	0.00	0.00	0.00	514H Toe



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well # 514H - Slot 3
Company:	DJR Operating	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Project:	Venado Canyon Unit	MD Reference:	GL 6941' & RKB 14' @ 6955ft
Site:	M01 2206 Pad	North Reference:	True
Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original drilling		
Design:	APD		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0	0.00	0.00	0	0	0	0	0.00	0.00	0.00
100	0.00	0.00	100	0	0	0	0.00	0.00	0.00
200	0.00	0.00	200	0	0	0	0.00	0.00	0.00
300	0.00	0.00	300	0	0	0	0.00	0.00	0.00
400	0.00	0.00	400	0	0	0	0.00	0.00	0.00
460	0.00	0.00	460	0	0	0	0.00	0.00	0.00
500	0.80	357.29	500	0	0	0	2.00	2.00	0.00
600	2.80	357.29	600	3	0	-2	2.00	2.00	0.00
700	4.80	357.29	700	10	0	-7	2.00	2.00	0.00
800	6.80	357.29	799	20	-1	-14	2.00	2.00	0.00
869	8.18	357.29	867	29	-1	-20	2.00	2.00	0.00
900	8.18	357.29	898	34	-2	-24	0.00	0.00	0.00
1000	8.18	357.29	997	48	-2	-34	0.00	0.00	0.00
1100	8.18	357.29	1096	62	-3	-44	0.00	0.00	0.00
1200	8.18	357.29	1195	76	-4	-54	0.00	0.00	0.00
1300	8.18	357.29	1294	90	-4	-64	0.00	0.00	0.00
1400	8.18	357.29	1393	105	-5	-74	0.00	0.00	0.00
1500	8.18	357.29	1492	119	-6	-84	0.00	0.00	0.00
1600	8.18	357.29	1591	133	-6	-94	0.00	0.00	0.00
1700	8.18	357.29	1690	147	-7	-104	0.00	0.00	0.00
1800	8.18	357.29	1789	161	-8	-114	0.00	0.00	0.00
1900	8.18	357.29	1888	176	-8	-124	0.00	0.00	0.00
2000	8.18	357.29	1987	190	-9	-134	0.00	0.00	0.00
2100	8.18	357.29	2086	204	-10	-144	0.00	0.00	0.00
2200	8.18	357.29	2185	218	-10	-154	0.00	0.00	0.00
2300	8.18	357.29	2284	232	-11	-164	0.00	0.00	0.00
2400	8.18	357.29	2383	247	-12	-174	0.00	0.00	0.00
2500	8.18	357.29	2482	261	-12	-184	0.00	0.00	0.00
2600	8.18	357.29	2581	275	-13	-194	0.00	0.00	0.00
2700	8.18	357.29	2680	289	-14	-204	0.00	0.00	0.00
2800	8.18	357.29	2779	303	-14	-214	0.00	0.00	0.00
2900	8.18	357.29	2878	318	-15	-224	0.00	0.00	0.00
3000	8.18	357.29	2977	332	-16	-234	0.00	0.00	0.00
3100	8.18	357.29	3076	346	-16	-244	0.00	0.00	0.00
3200	8.18	357.29	3175	360	-17	-254	0.00	0.00	0.00
3300	8.18	357.29	3274	374	-18	-264	0.00	0.00	0.00
3400	8.18	357.29	3373	389	-18	-274	0.00	0.00	0.00
3500	8.18	357.29	3472	403	-19	-284	0.00	0.00	0.00
3600	8.18	357.29	3571	417	-20	-294	0.00	0.00	0.00
3700	8.18	357.29	3670	431	-20	-304	0.00	0.00	0.00
3800	8.18	357.29	3769	445	-21	-314	0.00	0.00	0.00
3900	8.18	357.29	3868	460	-22	-324	0.00	0.00	0.00
4000	8.18	357.29	3967	474	-22	-334	0.00	0.00	0.00
4100	8.18	357.29	4066	488	-23	-344	0.00	0.00	0.00
4200	8.18	357.29	4165	502	-24	-354	0.00	0.00	0.00
4247	8.18	357.29	4212	509	-24	-358	0.00	0.00	0.00
4300	5.61	31.50	4264	515	-23	-361	9.00	-4.88	65.06
4400	9.35	100.51	4363	518	-12	-355	9.00	3.74	69.01
4500	17.46	118.21	4460	509	9	-334	9.00	8.11	17.70
4600	26.15	124.65	4553	489	40	-297	9.00	8.69	6.43
4700	34.99	128.01	4639	459	81	-247	9.00	8.84	3.36
4800	43.88	130.14	4716	419	130	-183	9.00	8.90	2.14
4900	52.81	131.68	4783	370	187	-109	9.00	8.93	1.54
5000	61.75	132.89	4837	314	249	-25	9.00	8.94	1.21



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well # 514H - Slot 3
Company:	DJR Operating	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Project:	Venado Canyon Unit	MD Reference:	GL 6941' & RKB 14' @ 6955ft
Site:	M01 2206 Pad	North Reference:	True
Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original drilling		
Design:	APD		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5100	70.71	133.91	4877	251	315	67	9.00	8.95	1.02	
5200	79.66	134.83	4903	183	384	163	9.00	8.96	0.91	
5300	88.62	135.69	4913	113	454	262	9.00	8.96	0.86	
5318	90.21	135.84	4913	100	467	280	9.01	8.96	0.85	
5400	90.21	135.84	4913	41	524	362	0.00	0.00	0.00	
5500	90.21	135.84	4912	-31	593	462	0.00	0.00	0.00	
5600	90.21	135.84	4912	-103	663	562	0.00	0.00	0.00	
5700	90.21	135.84	4912	-174	733	661	0.00	0.00	0.00	
5800	90.21	135.84	4911	-246	802	761	0.00	0.00	0.00	
5900	90.21	135.84	4911	-318	872	861	0.00	0.00	0.00	
6000	90.21	135.84	4910	-390	942	961	0.00	0.00	0.00	
6100	90.21	135.84	4910	-461	1011	1061	0.00	0.00	0.00	
6200	90.21	135.84	4910	-533	1081	1160	0.00	0.00	0.00	
6300	90.21	135.84	4909	-605	1151	1260	0.00	0.00	0.00	
6400	90.21	135.84	4909	-677	1220	1360	0.00	0.00	0.00	
6500	90.21	135.84	4909	-748	1290	1460	0.00	0.00	0.00	
6600	90.21	135.84	4908	-820	1360	1559	0.00	0.00	0.00	
6700	90.21	135.84	4908	-892	1429	1659	0.00	0.00	0.00	
6800	90.21	135.84	4908	-964	1499	1759	0.00	0.00	0.00	
6900	90.21	135.84	4907	-1035	1569	1859	0.00	0.00	0.00	
7000	90.21	135.84	4907	-1107	1638	1958	0.00	0.00	0.00	
7100	90.21	135.84	4906	-1179	1708	2058	0.00	0.00	0.00	
7200	90.21	135.84	4906	-1250	1778	2158	0.00	0.00	0.00	
7300	90.21	135.84	4906	-1322	1847	2258	0.00	0.00	0.00	
7400	90.21	135.84	4905	-1394	1917	2358	0.00	0.00	0.00	
7500	90.21	135.84	4905	-1466	1987	2457	0.00	0.00	0.00	
7600	90.21	135.84	4905	-1537	2056	2557	0.00	0.00	0.00	
7700	90.21	135.84	4904	-1609	2126	2657	0.00	0.00	0.00	
7800	90.21	135.84	4904	-1681	2196	2757	0.00	0.00	0.00	
7900	90.21	135.84	4904	-1753	2265	2856	0.00	0.00	0.00	
8000	90.21	135.84	4903	-1824	2335	2956	0.00	0.00	0.00	
8100	90.21	135.84	4903	-1896	2405	3056	0.00	0.00	0.00	
8200	90.21	135.84	4902	-1968	2474	3156	0.00	0.00	0.00	
8300	90.21	135.84	4902	-2040	2544	3256	0.00	0.00	0.00	
8400	90.21	135.84	4902	-2111	2614	3355	0.00	0.00	0.00	
8500	90.21	135.84	4901	-2183	2683	3455	0.00	0.00	0.00	
8600	90.21	135.84	4901	-2255	2753	3555	0.00	0.00	0.00	
8700	90.21	135.84	4901	-2327	2823	3655	0.00	0.00	0.00	
8800	90.21	135.84	4900	-2398	2892	3754	0.00	0.00	0.00	
8900	90.21	135.84	4900	-2470	2962	3854	0.00	0.00	0.00	
9000	90.21	135.84	4899	-2542	3032	3954	0.00	0.00	0.00	
9100	90.21	135.84	4899	-2614	3101	4054	0.00	0.00	0.00	
9200	90.21	135.84	4899	-2685	3171	4153	0.00	0.00	0.00	
9300	90.21	135.84	4898	-2757	3241	4253	0.00	0.00	0.00	
9400	90.21	135.84	4898	-2829	3310	4353	0.00	0.00	0.00	
9500	90.21	135.84	4898	-2901	3380	4453	0.00	0.00	0.00	
9600	90.21	135.84	4897	-2972	3450	4553	0.00	0.00	0.00	
9700	90.21	135.84	4897	-3044	3519	4652	0.00	0.00	0.00	
9800	90.21	135.84	4897	-3116	3589	4752	0.00	0.00	0.00	
9900	90.21	135.84	4896	-3187	3659	4852	0.00	0.00	0.00	
10,000	90.21	135.84	4896	-3259	3728	4952	0.00	0.00	0.00	
10,100	90.21	135.84	4895	-3331	3798	5051	0.00	0.00	0.00	
10,200	90.21	135.84	4895	-3403	3868	5151	0.00	0.00	0.00	
10,300	90.21	135.84	4895	-3474	3937	5251	0.00	0.00	0.00	



Lonestar Consulting, LLC
Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well # 514H - Slot 3
Company:	DJR Operating	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Project:	Venado Canyon Unit	MD Reference:	GL 6941' & RKB 14' @ 6955ft
Site:	M01 2206 Pad	North Reference:	True
Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original drilling		
Design:	APD		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,400	90.21	135.84	4894	-3546	4007	5351	0.00	0.00	0.00	
10,500	90.21	135.84	4894	-3618	4077	5450	0.00	0.00	0.00	
10,600	90.21	135.84	4894	-3690	4146	5550	0.00	0.00	0.00	
10,700	90.21	135.84	4893	-3761	4216	5650	0.00	0.00	0.00	
10,800	90.21	135.84	4893	-3833	4286	5750	0.00	0.00	0.00	
10,900	90.21	135.84	4893	-3905	4355	5850	0.00	0.00	0.00	
11,000	90.21	135.84	4892	-3977	4425	5949	0.00	0.00	0.00	
11,039	90.21	135.84	4892	-4005	4452	5988	0.00	0.00	0.00	

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
514H Toe - plan hits target center - Circle (radius 100)	0.00	0.00	4892	-4005	4452	1,874,552.05	2,847,277.64	36.15106200	-107.41268200	
514H Heel Rev 1 - plan hits target center - Circle (radius 50)	0.00	0.00	4913	100	467	1,878,639.85	2,843,274.72	36.16233828	-107.42618262	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
350	350	Surface	9.63	12.25	
5260	4911	Intermediate	7.00	8.75	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1337	1331	Ojo Alamo		0.00	0.00	
1436	1429	Kirtland		0.00	0.00	
1639	1630	Fruitland		0.00	0.00	
1842	1831	Pictured Cliffs		0.00	0.00	
1948	1936	Lewis		0.00	0.00	
2704	2684	Chacra		0.00	0.00	
3413	3386	Menefee		0.00	0.00	
4131	4096	Point Lookout		0.00	0.00	
4274	4238	Mancos		0.00	0.00	
4646	4594	Mancos Silt		0.00	0.00	



DJR Operating

Venado Canyon Unit

M01 2206 Pad

514H

Original drilling

APD

Anticollision Report

18 May, 2021





Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 514H - Slot 3
Project:	Venado Canyon Unit	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Reference Site:	M01 2206 Pad	MD Reference:	GL 6941' & RKB 14' @ 6955ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference	APD		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 10,000ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	5/18/2021		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0	11,039	APD (Original drilling)	MWD+IGRF	OWSG MWD + IGRF or WMM	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
E01 2206 Pad						
Chaco 2206 02P 227H - OH - OH	4547	4791	120	86	3.555	CC
Chaco 2206 02P 227H - OH - OH	4550	4794	120	86	3.538	ES
Chaco 2206 02P 227H - OH - OH	4600	4832	124	88	3.396	SF
M01 2206 Pad						
# 101H - Original drilling - APD	317	317	20	18	10.800	CC
# 101H - Original drilling - APD	460	460	20	17	7.059	ES
# 101H - Original drilling - APD	11,039	11,428	651	406	2.651	SF
# 513H - Original drilling - APD	402	402	40	38	16.203	CC
# 513H - Original drilling - APD	460	460	40	37	13.945	ES
# 513H - Original drilling - APD	11,039	10,564	1312	1013	4.379	SF

Offset Design: E01 2206 Pad - Chaco 2206 02P 227H - OH - OH													Offset Site Error: 0 ft	
Survey Program: 465-MWD		Offset		Semi Major Axis		Offset Wellbore Centre			Rule Assigned: Distance				Offset Well Error: 0 ft	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
0	0	3	3	0	0	-104.00	-302	-1210	1248					
100	100	105	105	0	0	-104.01	-302	-1210	1247	1247	0.27	4,604.772		
200	200	208	208	1	0	-104.04	-303	-1210	1247	1246	0.74	1,679.375		
300	300	310	310	1	0	-104.09	-303	-1209	1247	1245	1.21	1,026.640		
400	400	412	412	1	0	-104.15	-305	-1208	1246	1244	1.69	739.036		
460	460	476	476	1	1	-104.20	-306	-1207	1246	1244	1.98	627.854		
500	500	530	530	2	1	-101.56	-306	-1206	1245	1243	2.24	555.256		
600	600	646	646	2	1	-101.82	-307	-1203	1243	1240	2.85	436.773		
700	700	777	777	2	1	-102.24	-304	-1197	1239	1236	3.48	355.922		
800	799	894	893	3	1	-102.76	-300	-1190	1234	1230	4.10	300.928		
869	867	1000	999	3	2	-103.27	-293	-1182	1231	1226	4.60	267.851		
900	898	1071	1069	3	2	-103.53	-287	-1175	1228	1223	4.87	251.995		
1000	997	1289	1283	3	3	-104.24	-261	-1141	1214	1208	5.77	210.151		
1100	1096	1466	1453	4	4	-104.67	-233	-1100	1190	1183	6.62	179.662		
1200	1195	1627	1604	4	5	-104.94	-202	-1055	1161	1153	7.47	155.480		
1300	1294	1727	1697	5	5	-105.06	-181	-1024	1129	1120	8.19	137.740		
1400	1393	1811	1775	5	6	-105.17	-164	-999	1097	1088	8.88	123.510		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 514H - Slot 3
Project:	Venado Canyon Unit	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Reference Site:	M01 2206 Pad	MD Reference:	GL 6941' & RKB 14' @ 6955ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: E01 2206 Pad - Chaco 2206 02P 227H - OH - OH												Offset Site Error:	0 ft
Survey Program: 465-MWD												Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
1500	1492	1938	1892	6	7	-105.33	-137	-959	1064	1054	9.67	109.991	
1600	1591	2020	1968	6	7	-105.44	-119	-933	1030	1020	10.39	99.162	
1700	1690	2103	2045	6	8	-105.56	-101	-907	998	987	11.11	89.869	
1800	1789	2187	2123	7	8	-105.68	-84	-882	966	955	11.83	81.662	
1900	1888	2275	2205	7	9	-105.80	-65	-857	936	924	12.57	74.479	
2000	1987	2394	2316	8	10	-106.04	-41	-821	904	891	13.34	67.800	
2100	2086	2482	2398	8	10	-106.22	-22	-793	872	858	14.08	61.918	
2200	2185	2589	2497	9	11	-106.43	1	-760	840	825	14.84	56.571	
2300	2284	2682	2583	9	12	-106.60	21	-730	806	790	15.60	51.676	
2400	2383	2768	2662	10	12	-106.75	40	-704	773	757	16.35	47.294	
2500	2482	2858	2746	10	13	-106.87	60	-677	742	724	17.11	43.339	
2600	2581	2953	2834	10	14	-106.97	82	-649	710	692	17.88	39.705	
2700	2680	3045	2919	11	14	-107.21	101	-621	679	660	18.63	36.430	
2800	2779	3137	3005	11	15	-107.49	121	-594	648	628	19.36	33.444	
2900	2878	3231	3094	12	15	-107.82	140	-567	617	597	20.10	30.711	
3000	2977	3336	3191	12	16	-108.20	162	-535	586	565	20.81	28.142	
3100	3076	3433	3281	13	17	-108.57	183	-505	553	532	21.53	25.703	
3200	3175	3526	3367	13	18	-108.92	204	-476	521	498	22.27	23.375	
3300	3274	3621	3455	13	18	-109.34	225	-447	489	466	22.99	21.258	
3400	3373	3715	3542	14	19	-109.80	245	-419	457	433	23.71	19.261	
3500	3472	3812	3631	14	20	-110.34	267	-389	424	400	24.40	17.378	
3600	3571	3904	3717	15	20	-110.93	287	-361	392	367	25.11	15.604	
3700	3670	3999	3805	15	21	-111.60	309	-332	360	334	25.79	13.948	
3800	3769	4092	3891	16	22	-112.67	328	-304	328	302	26.44	12.415	
3900	3868	4186	3978	16	22	-113.97	347	-275	297	270	27.05	10.976	
4000	3967	4284	4069	17	23	-115.60	368	-245	266	238	27.58	9.635	
4100	4066	4386	4164	17	24	-118.02	389	-211	232	204	27.94	8.309	
4200	4165	4479	4248	17	24	-121.04	410	-178	197	169	28.50	6.916	
4247	4212	4520	4285	18	25	-122.59	419	-165	181	153	28.87	6.286	
4250	4214	4522	4287	18	25	-123.69	419	-164	181	152	28.89	6.254	
4300	4264	4567	4329	18	25	-156.27	429	-150	165	136	29.28	5.653	
4350	4314	4612	4371	18	25	161.23	439	-137	152	122	29.67	5.117	
4400	4363	4658	4414	18	26	139.60	449	-124	140	109	30.09	4.638	
4450	4412	4705	4458	18	26	133.03	458	-111	129	99	30.72	4.210	
4500	4460	4750	4500	18	26	133.40	467	-100	122	90	31.82	3.840	
4547	4504	4791	4540	18	27	137.57	476	-90	120	86	33.65	3.555 CC	
4550	4508	4794	4542	18	27	137.98	477	-89	120	86	33.82	3.538 ES	
4600	4553	4832	4578	19	27	143.67	486	-82	124	88	36.65	3.396 SF	
4650	4597	4862	4607	19	27	148.28	494	-78	139	100	39.19	3.544	
4700	4639	4895	4638	19	27	153.23	504	-75	162	121	41.08	3.951	
4750	4679	4925	4667	19	27	156.86	513	-74	193	151	42.28	4.573	
4800	4716	4945	4686	19	27	157.60	518	-74	230	187	42.68	5.381	
4850	4751	4967	4708	19	27	158.17	524	-75	270	227	43.07	6.265	
4900	4783	4988	4728	18	27	157.68	529	-76	313	269	43.37	7.214	
4950	4811	5001	4740	18	27	154.84	532	-78	358	315	43.42	8.247	
5000	4837	5011	4750	18	27	150.01	534	-79	405	362	43.48	9.317	
5050	4859	5019	4757	18	27	141.34	536	-80	453	410	43.52	10.415	
5100	4877	5023	4762	19	27	125.20	537	-80	502	459	43.56	11.531	
5150	4892	5025	4763	19	27	96.91	537	-81	552	508	43.61	12.653	
5200	4903	5024	4762	20	27	64.20	537	-80	601	558	43.66	13.773	
5250	4910	5020	4759	20	27	42.51	536	-80	651	607	43.72	14.882	
5300	4913	5015	4754	21	27	30.69	535	-79	700	656	43.79	15.974	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 514H - Slot 3
Project:	Venado Canyon Unit	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Reference Site:	M01 2206 Pad	MD Reference:	GL 6941' & RKB 14' @ 6955ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: E01 2206 Pad - Chaco 2206 02P 227H - OH - OH												Offset Site Error:	0 ft
Survey Program: 465-MWD												Offset Well Error:	0 ft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5318	4913	5012	4751	21	27	27.89	535	-79	717	673	43.82	16.356	
5400	4913	4988	4728	22	27	25.35	529	-76	796	753	43.76	18.198	
5500	4912	4988	4728	24	27	25.35	529	-76	893	849	44.07	20.266	
5600	4912	4970	4710	25	27	23.92	525	-75	990	946	44.08	22.467	
5700	4912	4952	4693	27	27	22.85	520	-74	1088	1044	44.09	24.673	
5800	4911	4934	4676	29	27	22.06	515	-74	1185	1141	44.09	26.884	
5900	4911	4925	4667	31	27	21.73	513	-74	1283	1239	44.16	29.049	
6000	4910	4925	4667	33	27	21.73	513	-74	1381	1336	44.31	31.165	
6100	4910	4925	4667	35	27	21.73	513	-74	1479	1435	44.42	33.292	
6200	4910	4903	4646	37	27	21.11	506	-75	1577	1533	44.32	35.577	
6300	4909	4897	4641	39	27	20.99	504	-75	1675	1631	44.38	37.751	
6400	4909	4893	4636	41	27	20.89	503	-75	1774	1729	44.42	39.926	
6500	4909	4888	4632	44	27	20.80	502	-75	1872	1828	44.47	42.103	
6600	4908	4862	4607	46	27	20.41	494	-78	1971	1927	44.34	44.463	
6700	4908	4862	4607	48	27	20.41	494	-78	2070	2026	44.42	46.608	
6800	4908	4862	4607	50	27	20.41	494	-78	2169	2124	44.48	48.756	
6900	4907	4862	4607	53	27	20.41	494	-78	2268	2223	44.55	50.905	
7000	4907	4862	4607	55	27	20.41	494	-78	2367	2322	44.61	53.056	
7100	4906	4862	4607	57	27	20.41	494	-78	2466	2421	44.66	55.208	
7200	4906	4862	4607	60	27	20.41	494	-78	2565	2520	44.72	57.359	
7300	4906	4862	4607	62	27	20.41	494	-78	2664	2619	44.77	59.510	
7400	4905	4862	4607	64	27	20.41	494	-78	2763	2719	44.82	61.661	
7500	4905	4862	4607	67	27	20.41	494	-78	2863	2818	44.86	63.810	
7600	4905	4862	4607	69	27	20.41	494	-78	2962	2917	44.91	65.957	
7700	4904	4862	4607	72	27	20.41	494	-78	3061	3016	44.95	68.102	
7800	4904	4862	4607	74	27	20.41	494	-78	3161	3116	45.00	70.245	
7900	4904	4862	4607	76	27	20.41	494	-78	3260	3215	45.04	72.386	
8000	4903	4862	4607	79	27	20.41	494	-78	3360	3315	45.08	74.524	
8100	4903	4862	4607	81	27	20.41	494	-78	3459	3414	45.13	76.659	
8200	4902	4862	4607	84	27	20.41	494	-78	3559	3514	45.17	78.790	
8300	4902	4862	4607	86	27	20.41	494	-78	3658	3613	45.21	80.918	
8400	4902	4862	4607	88	27	20.41	494	-78	3758	3713	45.25	83.043	
8500	4901	4862	4607	91	27	20.41	494	-78	3858	3812	45.30	85.164	
8600	4901	4862	4607	93	27	20.41	494	-78	3957	3912	45.34	87.280	
8700	4901	4862	4607	96	27	20.41	494	-78	4057	4012	45.38	89.393	
8800	4900	4862	4607	98	27	20.41	494	-78	4157	4111	45.43	91.501	
8900	4900	4862	4607	101	27	20.41	494	-78	4256	4211	45.47	93.605	
9000	4899	4862	4607	103	27	20.41	494	-78	4356	4310	45.52	95.704	
9100	4899	4862	4607	106	27	20.41	494	-78	4456	4410	45.56	97.798	
9200	4899	4834	4580	108	27	20.14	486	-82	4555	4509	45.44	100.231	
9300	4898	4833	4579	110	27	20.13	486	-82	4654	4609	45.48	102.332	
9400	4898	4832	4578	113	27	20.13	486	-82	4754	4709	45.53	104.427	
9500	4898	4831	4578	115	27	20.12	486	-82	4854	4808	45.57	106.517	
9600	4897	4830	4577	118	27	20.11	486	-82	4954	4908	45.61	108.601	
9700	4897	4829	4576	120	27	20.11	485	-83	5053	5008	45.66	110.680	
9800	4897	4829	4575	123	27	20.10	485	-83	5153	5107	45.70	112.753	
9900	4896	4828	4575	125	27	20.10	485	-83	5253	5207	45.75	114.821	
10,000	4896	4827	4574	128	27	20.09	485	-83	5353	5307	45.79	116.882	
10,100	4895	4798	4546	130	27	19.95	478	-89	5453	5407	45.68	119.363	
10,200	4895	4798	4546	132	27	19.95	478	-89	5553	5507	45.74	121.407	
10,300	4895	4798	4546	135	27	19.95	478	-89	5653	5607	45.79	123.445	
10,400	4894	4798	4546	137	27	19.95	478	-89	5752	5706	45.84	125.477	



Lonestar Consulting, LLC
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 514H - Slot 3
Project:	Venado Canyon Unit	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Reference Site:	M01 2206 Pad	MD Reference:	GL 6941' & RKB 14' @ 6955ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: E01 2206 Pad - Chaco 2206 02P 227H - OH - OH												Offset Site Error:	0 ft
Survey Program: 465-MWD												Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Rule Assigned:			Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,500	4894	4798	4546	140	27	19.95	478	-89	5852	5806	45.90	127.503	
10,600	4894	4798	4546	142	27	19.95	478	-89	5952	5906	45.95	129.522	
10,700	4893	4798	4546	145	27	19.95	478	-89	6052	6006	46.01	131.535	
10,800	4893	4798	4546	147	27	19.95	478	-89	6151	6105	46.06	133.542	
10,900	4893	4798	4546	150	27	19.95	478	-89	6251	6205	46.12	135.542	
11,000	4892	4798	4546	152	27	19.95	478	-89	6351	6305	46.18	137.536	
11,039	4892	4798	4546	153	27	19.95	478	-89	6390	6344	46.20	138.314	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 514H - Slot 3
Project:	Venado Canyon Unit	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Reference Site:	M01 2206 Pad	MD Reference:	GL 6941' & RKB 14' @ 6955ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: M01 2206 Pad - # 101H - Original drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0 ft
Reference	Offset	Rule Assigned:											Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor		
							+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0	0	0	0	0	0	-112.35	-8	-19	20					
100	100	100	100	0	0	-112.35	-8	-19	20	20	0.31	65.221		
200	200	200	200	1	1	-112.35	-8	-19	20	19	1.03	19.612		
300	300	300	300	1	1	-112.35	-8	-19	20	18	1.74	11.541		
317	317	317	317	1	1	-112.35	-8	-19	20	18	1.86	10.800 CC		
400	400	400	400	1	1	-112.35	-8	-19	20	18	2.46	8.176		
460	460	460	460	1	1	-110.76	-7	-19	20	17	2.89	7.059 ES		
500	500	500	500	2	2	-106.05	-6	-20	21	18	3.17	6.614		
600	600	599	599	2	2	-102.36	-3	-24	24	21	3.89	6.282		
700	700	699	698	2	2	-101.04	3	-30	30	26	4.61	6.589		
800	799	798	797	3	3	-104.49	9	-37	37	32	5.35	6.996		
869	867	867	866	3	3	-108.74	13	-41	43	37	5.88	7.312		
900	898	898	897	3	3	-110.81	15	-43	46	40	6.12	7.467		
1000	997	997	996	3	3	-116.02	21	-50	55	48	6.90	7.931		
1100	1096	1097	1095	4	4	-119.74	27	-57	64	56	7.68	8.337		
1200	1195	1196	1194	4	4	-122.51	33	-63	74	65	8.47	8.689		
1300	1294	1296	1293	5	5	-124.64	39	-70	83	74	9.26	8.993		
1400	1393	1395	1392	5	5	-126.32	46	-77	93	83	10.05	9.258		
1500	1492	1495	1491	6	5	-127.68	52	-84	103	92	10.84	9.488		
1600	1591	1594	1590	6	6	-128.81	58	-90	113	101	11.63	9.691		
1700	1690	1694	1689	6	6	-129.75	64	-97	123	110	12.42	9.871		
1800	1789	1793	1788	7	7	-130.56	70	-104	133	119	13.21	10.031		
1900	1888	1893	1887	7	7	-131.25	76	-110	142	128	14.00	10.173		
2000	1987	1992	1986	8	7	-131.85	82	-117	152	138	14.80	10.302		
2100	2086	2092	2086	8	8	-132.38	88	-124	162	147	15.59	10.418		
2200	2185	2191	2185	9	8	-132.84	94	-130	172	156	16.38	10.524		
2300	2284	2291	2284	9	9	-133.26	101	-137	182	165	17.18	10.620		
2400	2383	2390	2383	10	9	-133.63	107	-144	192	174	17.97	10.708		
2500	2482	2490	2482	10	9	-133.96	113	-150	202	184	18.76	10.789		
2600	2581	2589	2581	10	10	-134.27	119	-157	212	193	19.56	10.864		
2700	2680	2689	2680	11	10	-134.54	125	-164	223	202	20.35	10.933		
2800	2779	2788	2779	11	10	-134.79	131	-171	233	211	21.15	10.997		
2900	2878	2888	2878	12	11	-135.03	137	-177	243	221	21.94	11.057		
3000	2977	2987	2977	12	11	-135.24	143	-184	253	230	22.74	11.112		
3100	3076	3087	3076	13	12	-135.43	149	-191	263	239	23.53	11.164		
3200	3175	3186	3175	13	12	-135.62	156	-197	273	248	24.32	11.212		
3300	3274	3286	3274	13	12	-135.79	162	-204	283	258	25.12	11.258		
3400	3373	3385	3374	14	13	-135.94	168	-211	293	267	25.91	11.301		
3500	3472	3485	3473	14	13	-136.09	174	-217	303	276	26.71	11.341		
3600	3571	3584	3572	15	14	-136.23	180	-224	313	285	27.50	11.379		
3700	3670	3684	3671	15	14	-136.36	186	-231	323	295	28.30	11.415		
3800	3769	3783	3770	16	14	-136.48	192	-238	333	304	29.09	11.449		
3900	3868	3883	3869	16	15	-136.59	198	-244	343	313	29.89	11.481		
4000	3967	3982	3968	17	15	-136.70	205	-251	353	323	30.68	11.512		
4100	4066	4082	4067	17	16	-136.80	211	-258	363	332	31.48	11.541		
4200	4165	4181	4166	17	16	-136.90	217	-264	373	341	32.27	11.568		
4247	4212	4228	4213	18	16	-136.94	220	-268	378	345	32.65	11.581		
4250	4214	4231	4216	18	16	-138.06	220	-268	378	346	32.67	11.582		
4300	4264	4281	4265	18	16	-171.11	223	-271	383	350	33.06	11.590		
4350	4314	4330	4314	18	17	145.34	226	-274	388	354	33.45	11.592		
4400	4363	4379	4363	18	17	121.73	229	-278	392	358	33.82	11.593		
4450	4412	4427	4411	18	17	111.89	232	-281	396	362	34.18	11.600		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 514H - Slot 3
Project:	Venado Canyon Unit	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Reference Site:	M01 2206 Pad	MD Reference:	GL 6941' & RKB 14' @ 6955ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: M01 2206 Pad - # 101H - Original drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF												Offset Well Error:	0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4500	4460	4474	4458	18	17	107.75	235	-284	401	367	34.52	11.625	
4550	4508	4519	4503	18	17	106.26	238	-287	407	372	34.84	11.680	
4600	4553	4563	4546	19	18	106.15	240	-290	414	379	35.13	11.779	
4650	4597	4605	4588	19	18	106.78	243	-293	422	387	35.39	11.937	
4700	4639	4644	4627	19	18	107.75	245	-296	433	398	35.61	12.167	
4750	4679	4690	4673	19	18	109.44	247	-298	446	411	35.84	12.455	
4800	4716	4739	4722	19	18	111.38	246	-298	461	425	36.03	12.805	
4850	4751	4793	4776	19	18	113.44	243	-294	478	442	36.14	13.221	
4900	4783	4851	4833	18	18	115.60	235	-287	496	459	36.15	13.706	
4950	4811	4915	4894	18	18	117.88	222	-276	514	478	36.03	14.267	
5000	4837	4986	4960	18	19	120.26	203	-258	533	497	35.74	14.914	
5050	4859	5066	5030	18	19	122.73	175	-232	552	517	35.24	15.657	
5100	4877	5157	5103	19	19	125.24	135	-195	570	535	34.53	16.498	
5150	4892	5239	5162	19	19	126.91	93	-155	586	552	33.96	17.252	
5200	4903	5378	5244	20	19	129.80	12	-78	600	567	32.94	18.203	
5250	4910	5509	5296	20	20	131.41	-75	4	609	577	32.75	18.611	
5300	4913	5650	5324	21	21	132.22	-175	99	615	581	33.65	18.266	
5318	4913	5701	5327	21	22	132.29	-212	134	615	581	34.29	17.944	
5400	4913	5789	5327	22	23	132.24	-275	195	616	580	35.96	17.123	
5500	4912	5889	5326	24	24	132.19	-347	264	616	578	38.18	16.147	
5600	4912	5989	5326	25	26	132.13	-420	333	617	576	40.64	15.185	
5700	4912	6089	5326	27	27	132.08	-492	402	618	574	43.30	14.264	
5800	4911	6189	5325	29	29	132.03	-564	471	618	572	46.14	13.401	
5900	4911	6289	5325	31	31	131.97	-637	540	619	570	49.12	12.600	
6000	4910	6389	5324	33	33	131.92	-709	610	619	567	52.22	11.864	
6100	4910	6489	5324	35	35	131.87	-781	679	620	565	55.42	11.190	
6200	4910	6589	5324	37	37	131.81	-854	748	621	562	58.70	10.574	
6300	4909	6689	5323	39	39	131.76	-926	817	621	559	62.06	10.011	
6400	4909	6789	5323	41	41	131.71	-998	886	622	556	65.49	9.498	
6500	4909	6889	5322	44	44	131.65	-1071	955	623	554	68.96	9.028	
6600	4908	6989	5322	46	46	131.60	-1143	1024	623	551	72.48	8.598	
6700	4908	7089	5322	48	48	131.55	-1215	1093	624	548	76.05	8.203	
6800	4908	7189	5321	50	50	131.50	-1288	1162	624	545	79.65	7.840	
6900	4907	7289	5321	53	53	131.44	-1360	1231	625	542	83.28	7.505	
7000	4907	7389	5321	55	55	131.39	-1432	1300	626	539	86.94	7.196	
7100	4906	7489	5320	57	57	131.34	-1505	1369	626	536	90.63	6.910	
7200	4906	7589	5320	60	60	131.29	-1577	1438	627	533	94.34	6.645	
7300	4906	7689	5319	62	62	131.23	-1649	1507	628	529	98.08	6.398	
7400	4905	7789	5319	64	64	131.18	-1722	1576	628	526	101.83	6.169	
7500	4905	7889	5319	67	67	131.13	-1794	1645	629	523	105.60	5.954	
7600	4905	7989	5318	69	69	131.08	-1866	1714	629	520	109.39	5.754	
7700	4904	8089	5318	72	71	131.03	-1939	1783	630	517	113.20	5.566	
7800	4904	8189	5317	74	74	130.97	-2011	1853	631	514	117.02	5.390	
7900	4904	8289	5317	76	76	130.92	-2083	1922	631	510	120.85	5.224	
8000	4903	8389	5317	79	79	130.87	-2156	1991	632	507	124.69	5.068	
8100	4903	8489	5316	81	81	130.82	-2228	2060	633	504	128.55	4.921	
8200	4902	8589	5316	84	83	130.77	-2300	2129	633	501	132.42	4.782	
8300	4902	8689	5316	86	86	130.72	-2373	2198	634	498	136.30	4.650	
8400	4902	8789	5315	88	88	130.67	-2445	2267	634	494	140.19	4.526	
8500	4901	8889	5315	91	91	130.62	-2517	2336	635	491	144.09	4.408	
8600	4901	8989	5314	93	93	130.57	-2589	2405	636	488	148.00	4.295	
8700	4901	9089	5314	96	96	130.51	-2662	2474	636	484	151.92	4.189	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 514H - Slot 3
Project:	Venado Canyon Unit	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Reference Site:	M01 2206 Pad	MD Reference:	GL 6941' & RKB 14' @ 6955ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: M01 2206 Pad - # 101H - Original drilling - APD													Offset Site Error:	0 ft	
Survey Program:		0-MWD+IGRF		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:				Offset Well Error:	0 ft
Measured Depth	Reference	Vertical	Measured	Vertical	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
8800		4900	9189	5314	98	98	130.46	-2734	2543	637	481	155.84	4.087		
8900		4900	9289	5313	101	100	130.41	-2806	2612	638	478	159.78	3.990		
9000		4899	9389	5313	103	103	130.36	-2879	2681	638	475	163.72	3.898		
9100		4899	9489	5312	106	105	130.31	-2951	2750	639	471	167.68	3.810		
9200		4899	9589	5312	108	108	130.26	-3023	2819	639	468	171.64	3.726		
9300		4898	9689	5312	110	110	130.21	-3096	2888	640	465	175.60	3.645		
9400		4898	9789	5311	113	113	130.16	-3168	2957	641	461	179.58	3.568		
9500		4898	9889	5311	115	115	130.11	-3240	3026	641	458	183.56	3.494		
9600		4897	9989	5311	118	117	130.06	-3313	3095	642	454	187.55	3.423		
9700		4897	10,089	5310	120	120	130.01	-3385	3165	643	451	191.54	3.355		
9800		4897	10,189	5310	123	122	129.96	-3457	3234	643	448	195.54	3.290		
9900		4896	10,289	5309	125	125	129.91	-3530	3303	644	444	199.55	3.227		
10,000		4896	10,389	5309	128	127	129.86	-3602	3372	645	441	203.56	3.166		
10,100		4895	10,489	5309	130	130	129.81	-3674	3441	645	438	207.58	3.108		
10,200		4895	10,589	5308	132	132	129.77	-3747	3510	646	434	211.61	3.052		
10,300		4895	10,689	5308	135	135	129.72	-3819	3579	646	431	215.64	2.998		
10,400		4894	10,789	5307	137	137	129.67	-3891	3648	647	427	219.68	2.946		
10,500		4894	10,889	5307	140	139	129.62	-3964	3717	648	424	223.72	2.895		
10,600		4894	10,989	5307	142	142	129.57	-4036	3786	648	421	227.77	2.847		
10,700		4893	11,089	5306	145	144	129.52	-4108	3855	649	417	231.83	2.800		
10,800		4893	11,189	5306	147	147	129.47	-4181	3924	650	414	235.89	2.754		
10,900		4893	11,289	5305	150	149	129.42	-4253	3993	650	410	239.96	2.710		
11,000		4892	11,389	5305	152	152	129.38	-4325	4062	651	407	244.03	2.668		
11,039		4892	11,428	5305	153	153	129.36	-4354	4089	651	406	245.62	2.651 SF		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 514H - Slot 3
Project:	Venado Canyon Unit	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Reference Site:	M01 2206 Pad	MD Reference:	GL 6941' & RKB 14' @ 6955ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: M01 2206 Pad - # 513H - Original drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0 ft
Reference	Offset	Rule Assigned:												
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S	+E/-W	Between Centres	Between Ellipses	(ft)			
							(ft)	(ft)	(ft)	(ft)	(ft)			
0	0	0	0	0	0	-112.99	-16	-37	40					
100	100	100	100	0	0	-112.99	-16	-37	40	40	0.31	130.013		
200	200	200	200	1	1	-112.99	-16	-37	40	39	1.03	39.095		
300	300	300	300	1	1	-112.99	-16	-37	40	38	1.74	23.006		
400	400	400	400	1	1	-112.99	-16	-37	40	38	2.46	16.299		
402	402	402	402	1	1	-112.99	-16	-37	40	38	2.47	16.203 CC		
460	460	460	460	1	1	-113.11	-16	-37	40	37	2.88	13.945 ES		
500	500	499	499	2	2	-111.26	-16	-37	41	38	3.16	12.931		
600	600	598	598	2	2	-117.46	-20	-40	46	42	3.85	11.894		
700	700	695	695	2	2	-126.41	-26	-44	56	52	4.55	12.397		
800	799	791	790	3	3	-134.68	-34	-50	74	68	5.25	14.037		
869	867	856	854	3	3	-139.21	-42	-55	90	84	5.73	15.634		
900	898	885	883	3	3	-140.99	-45	-57	98	92	5.95	16.440		
1000	997	977	973	3	3	-145.07	-59	-66	126	120	6.62	19.093		
1100	1096	1067	1062	4	4	-147.53	-74	-77	158	151	7.28	21.766		
1200	1195	1160	1153	4	4	-149.17	-91	-88	192	184	7.97	24.125		
1300	1294	1254	1244	5	5	-150.33	-108	-100	226	218	8.68	26.088		
1400	1393	1348	1336	5	5	-151.19	-126	-112	260	251	9.39	27.741		
1500	1492	1442	1427	6	6	-151.84	-143	-124	295	285	10.11	29.153		
1600	1591	1536	1519	6	6	-152.36	-161	-136	329	318	10.83	30.371		
1700	1690	1630	1610	6	7	-152.79	-178	-148	363	352	11.55	31.431		
1800	1789	1724	1702	7	7	-153.14	-195	-160	397	385	12.28	32.362		
1900	1888	1818	1793	7	8	-153.43	-213	-171	432	419	13.00	33.184		
2000	1987	1912	1885	8	8	-153.68	-230	-183	466	452	13.73	33.915		
2100	2086	2006	1977	8	9	-153.90	-247	-195	500	486	14.47	34.570		
2200	2185	2099	2068	9	9	-154.09	-265	-207	534	519	15.20	35.159		
2300	2284	2193	2160	9	10	-154.25	-282	-219	569	553	15.93	35.692		
2400	2383	2287	2251	10	10	-154.40	-299	-231	603	586	16.66	36.176		
2500	2482	2381	2343	10	11	-154.53	-317	-243	637	620	17.40	36.617		
2600	2581	2475	2434	10	11	-154.65	-334	-255	671	653	18.14	37.022		
2700	2680	2569	2526	11	12	-154.76	-351	-266	706	687	18.87	37.394		
2800	2779	2663	2617	11	12	-154.85	-369	-278	740	720	19.61	37.736		
2900	2878	2757	2709	12	13	-154.94	-386	-290	774	754	20.35	38.053		
3000	2977	2851	2800	12	13	-155.02	-403	-302	809	787	21.08	38.347		
3100	3076	2945	2892	13	14	-155.10	-421	-314	843	821	21.82	38.621		
3200	3175	3039	2984	13	14	-155.17	-438	-326	877	855	22.56	38.876		
3300	3274	3133	3075	13	15	-155.23	-456	-338	911	888	23.30	39.114		
3400	3373	3227	3167	14	15	-155.29	-473	-349	946	922	24.04	39.336		
3500	3472	3321	3258	14	16	-155.34	-490	-361	980	955	24.78	39.546		
3600	3571	3415	3350	15	17	-155.39	-508	-373	1014	989	25.52	39.742		
3700	3670	3508	3441	15	17	-155.44	-525	-385	1049	1022	26.26	39.927		
3800	3769	3602	3533	16	18	-155.48	-542	-397	1083	1056	27.00	40.101		
3900	3868	3696	3624	16	18	-155.53	-560	-409	1117	1089	27.74	40.266		
4000	3967	3790	3716	17	19	-155.57	-577	-421	1151	1123	28.48	40.422		
4100	4066	3884	3808	17	19	-155.60	-594	-432	1186	1156	29.23	40.569		
4200	4165	3978	3899	17	20	-155.64	-612	-444	1220	1190	29.97	40.709		
4247	4212	4023	3943	18	20	-155.65	-620	-450	1236	1206	30.32	40.773		
4250	4214	4025	3945	18	20	-156.83	-620	-450	1237	1207	30.34	40.777		
4300	4264	4072	3991	18	20	168.95	-629	-456	1253	1223	30.70	40.830		
4350	4314	4120	4037	18	20	123.96	-638	-462	1268	1237	31.04	40.859		
4400	4363	4167	4083	18	21	98.67	-647	-468	1281	1250	31.36	40.862		
4450	4412	4214	4129	18	21	86.97	-655	-474	1293	1261	31.65	40.838		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 514H - Slot 3
Project:	Venado Canyon Unit	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Reference Site:	M01 2206 Pad	MD Reference:	GL 6941' & RKB 14' @ 6955ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: M01 2206 Pad - # 513H - Original drilling - APD													Offset Site Error:	0 ft	
Survey Program:		0-MWD+IGRF		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:				Offset Well Error:	0 ft
Measured Depth	Reference Vertical	Measured Depth	Vertical	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Distance Between Ellipses	Minimum Separation	Separation Factor	Warning		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)				
4500	4460	4261	4175	18	21	80.85	-664	-480	1303	1271	31.94	40.787			
4550	4508	4307	4219	18	22	77.34	-672	-486	1311	1279	32.20	40.708			
4600	4553	4351	4263	19	22	75.27	-681	-491	1318	1285	32.45	40.602			
4650	4597	4391	4302	19	22	74.03	-688	-496	1323	1290	32.67	40.497			
4700	4639	4416	4326	19	22	73.02	-693	-499	1328	1295	32.78	40.505			
4750	4679	4450	4359	19	22	72.60	-701	-502	1332	1299	32.97	40.390			
4800	4716	4467	4375	19	22	72.05	-706	-502	1335	1302	33.04	40.394			
4850	4751	4500	4407	19	23	72.14	-715	-503	1337	1304	33.29	40.175			
4900	4783	4518	4424	18	23	72.02	-721	-503	1339	1306	33.46	40.037			
4950	4811	4550	4454	18	23	72.43	-732	-502	1341	1307	33.80	39.678			
5000	4837	4570	4472	18	23	72.64	-739	-500	1342	1308	34.11	39.353			
5050	4859	4600	4500	18	23	73.26	-751	-497	1343	1308	34.58	38.837			
5100	4877	4623	4520	19	23	73.75	-760	-494	1343	1308	35.07	38.307			
5150	4892	4650	4544	19	24	74.49	-772	-490	1343	1308	35.68	37.651			
5200	4903	4677	4567	20	24	75.27	-785	-485	1343	1307	36.37	36.933			
5250	4910	4704	4591	20	24	76.16	-798	-479	1343	1306	37.15	36.154			
5300	4913	4732	4614	21	24	77.13	-812	-473	1343	1305	38.01	35.333			
5318	4913	4742	4622	21	24	77.49	-818	-470	1343	1304	38.33	35.037			
5328	4913	4748	4627	21	24	77.70	-821	-468	1343	1304	38.52	34.861			
5400	4913	4795	4663	22	24	79.29	-846	-454	1344	1304	39.95	33.642			
5500	4912	4877	4722	24	25	81.86	-896	-424	1349	1307	42.27	31.918			
5600	4912	4986	4788	25	26	84.72	-966	-375	1356	1311	45.00	30.138			
5700	4912	5126	4851	27	27	87.43	-1065	-298	1363	1315	48.30	28.226			
5800	4911	5295	4889	29	29	89.06	-1187	-189	1367	1315	52.26	26.158			
5900	4911	5425	4892	31	30	89.20	-1280	-98	1366	1310	56.07	24.367			
6000	4910	5525	4891	33	31	89.20	-1351	-28	1365	1305	59.91	22.790			
6100	4910	5625	4891	35	33	89.19	-1422	43	1364	1300	63.85	21.364			
6200	4910	5725	4890	37	35	89.19	-1493	113	1363	1295	67.94	20.066			
6300	4909	5825	4890	39	36	89.18	-1564	184	1362	1290	72.13	18.884			
6400	4909	5925	4890	41	38	89.18	-1635	254	1361	1285	76.42	17.811			
6500	4909	6025	4889	44	40	89.18	-1706	324	1360	1279	80.79	16.835			
6600	4908	6125	4889	46	42	89.17	-1777	395	1359	1274	85.22	15.946			
6700	4908	6225	4888	48	44	89.17	-1848	465	1358	1268	89.71	15.136			
6800	4908	6325	4888	50	46	89.17	-1919	536	1357	1263	94.25	14.396			
6900	4907	6425	4887	53	48	89.16	-1990	606	1356	1257	98.84	13.718			
7000	4907	6525	4887	55	51	89.16	-2061	677	1355	1251	103.46	13.095			
7100	4906	6625	4886	57	53	89.15	-2132	747	1354	1246	108.11	12.522			
7200	4906	6725	4886	60	55	89.15	-2203	817	1353	1240	112.79	11.993			
7300	4906	6825	4886	62	57	89.15	-2274	888	1352	1234	117.49	11.504			
7400	4905	6925	4885	64	60	89.14	-2345	958	1351	1228	122.22	11.051			
7500	4905	7025	4885	67	62	89.14	-2416	1029	1350	1223	126.96	10.630			
7600	4905	7125	4884	69	64	89.13	-2487	1099	1348	1217	131.72	10.237			
7700	4904	7225	4884	72	66	89.13	-2558	1169	1347	1211	136.50	9.871			
7800	4904	7325	4883	74	69	89.13	-2629	1240	1346	1205	141.29	9.529			
7900	4904	7425	4883	76	71	89.12	-2700	1310	1345	1199	146.09	9.209			
8000	4903	7525	4882	79	73	89.12	-2771	1381	1344	1193	150.91	8.908			
8100	4903	7625	4882	81	76	89.11	-2842	1451	1343	1188	155.73	8.626			
8200	4902	7725	4882	84	78	89.11	-2913	1521	1342	1182	160.56	8.359			
8300	4902	7825	4881	86	81	89.11	-2984	1592	1341	1176	165.40	8.108			
8400	4902	7925	4881	88	83	89.10	-3055	1662	1340	1170	170.25	7.871			
8500	4901	8025	4880	91	85	89.10	-3126	1733	1339	1164	175.11	7.647			
8600	4901	8125	4880	93	88	89.09	-3197	1803	1338	1158	179.97	7.435			



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 514H - Slot 3
Project:	Venado Canyon Unit	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Reference Site:	M01 2206 Pad	MD Reference:	GL 6941' & RKB 14' @ 6955ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: M01 2206 Pad - # 513H - Original drilling - APD													Offset Site Error:	0 ft
Survey Program:		0-MWD+IGRF							Rule Assigned:				Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis		Offset		Highside		Offset Wellbore Centre		Distance		Minimum	Separation	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Separation (ft)	Factor		
8700	4901	8225	4879	96	90	89.09	-3268	1874	1337	1152	184.84	7.233		
8800	4900	8325	4879	98	93	89.09	-3339	1944	1336	1146	189.71	7.042		
8900	4900	8425	4878	101	95	89.08	-3410	2014	1335	1140	194.59	6.860		
9000	4899	8525	4878	103	97	89.08	-3481	2085	1334	1134	199.47	6.687		
9100	4899	8625	4877	106	100	89.07	-3552	2155	1333	1128	204.36	6.522		
9200	4899	8725	4877	108	102	89.07	-3623	2226	1332	1122	209.25	6.364		
9300	4898	8825	4877	110	105	89.06	-3694	2296	1331	1117	214.15	6.214		
9400	4898	8925	4876	113	107	89.06	-3765	2366	1330	1111	219.05	6.070		
9500	4898	9025	4876	115	110	89.06	-3836	2437	1329	1105	223.95	5.932		
9600	4897	9125	4875	118	112	89.05	-3907	2507	1328	1099	228.86	5.801		
9700	4897	9225	4875	120	114	89.05	-3978	2578	1326	1093	233.76	5.674		
9800	4897	9325	4874	123	117	89.04	-4049	2648	1325	1087	238.68	5.553		
9900	4896	9425	4874	125	119	89.04	-4120	2718	1324	1081	243.59	5.437		
10,000	4896	9525	4873	128	122	89.03	-4191	2789	1323	1075	248.50	5.325		
10,100	4895	9625	4873	130	124	89.03	-4262	2859	1322	1069	253.42	5.218		
10,200	4895	9725	4873	132	127	89.03	-4333	2930	1321	1063	258.34	5.114		
10,300	4895	9825	4872	135	129	89.02	-4404	3000	1320	1057	263.26	5.015		
10,400	4894	9925	4872	137	132	89.02	-4475	3071	1319	1051	268.19	4.919		
10,500	4894	10,025	4871	140	134	89.01	-4546	3141	1318	1045	273.11	4.826		
10,600	4894	10,125	4871	142	136	89.01	-4617	3211	1317	1039	278.04	4.737		
10,700	4893	10,225	4870	145	139	89.00	-4688	3282	1316	1033	282.97	4.651		
10,800	4893	10,324	4870	147	141	89.00	-4759	3352	1315	1027	287.90	4.567		
10,900	4893	10,424	4869	150	144	89.00	-4830	3423	1314	1021	292.83	4.487		
11,000	4892	10,524	4869	152	146	88.99	-4901	3493	1313	1015	297.77	4.409		
11,039	4892	10,564	4869	153	147	88.99	-4929	3521	1312	1013	299.69	4.379 SF		



Lonestar Consulting, LLC

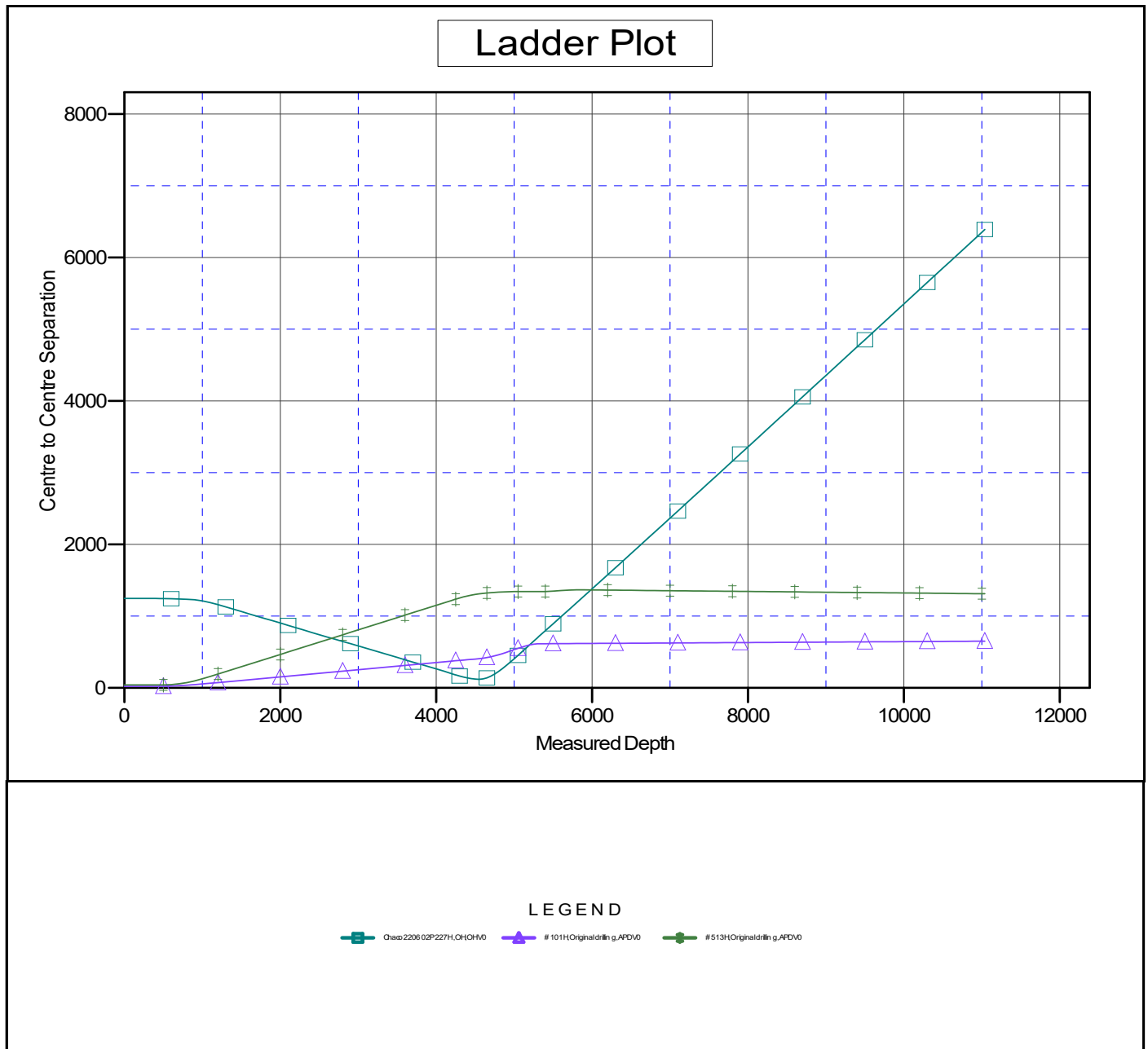
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 514H - Slot 3
Project:	Venado Canyon Unit	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Reference Site:	M01 2206 Pad	MD Reference:	GL 6941' & RKB 14' @ 6955ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 6941' & RKB 14' @ 6955ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.83333333

Coordinates are relative to: # 514H - Slot 3
 Coordinate System is US State Plane 1983, New Mexico Western Zone
 Grid Convergence at Surface is: 0.24°





Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 514H - Slot 3
Project:	Venado Canyon Unit	TVD Reference:	GL 6941' & RKB 14' @ 6955ft
Reference Site:	M01 2206 Pad	MD Reference:	GL 6941' & RKB 14' @ 6955ft
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Reference Well:	# 514H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 6941' & RKB 14' @ 6955ft

Offset Depths are relative to Offset Datum

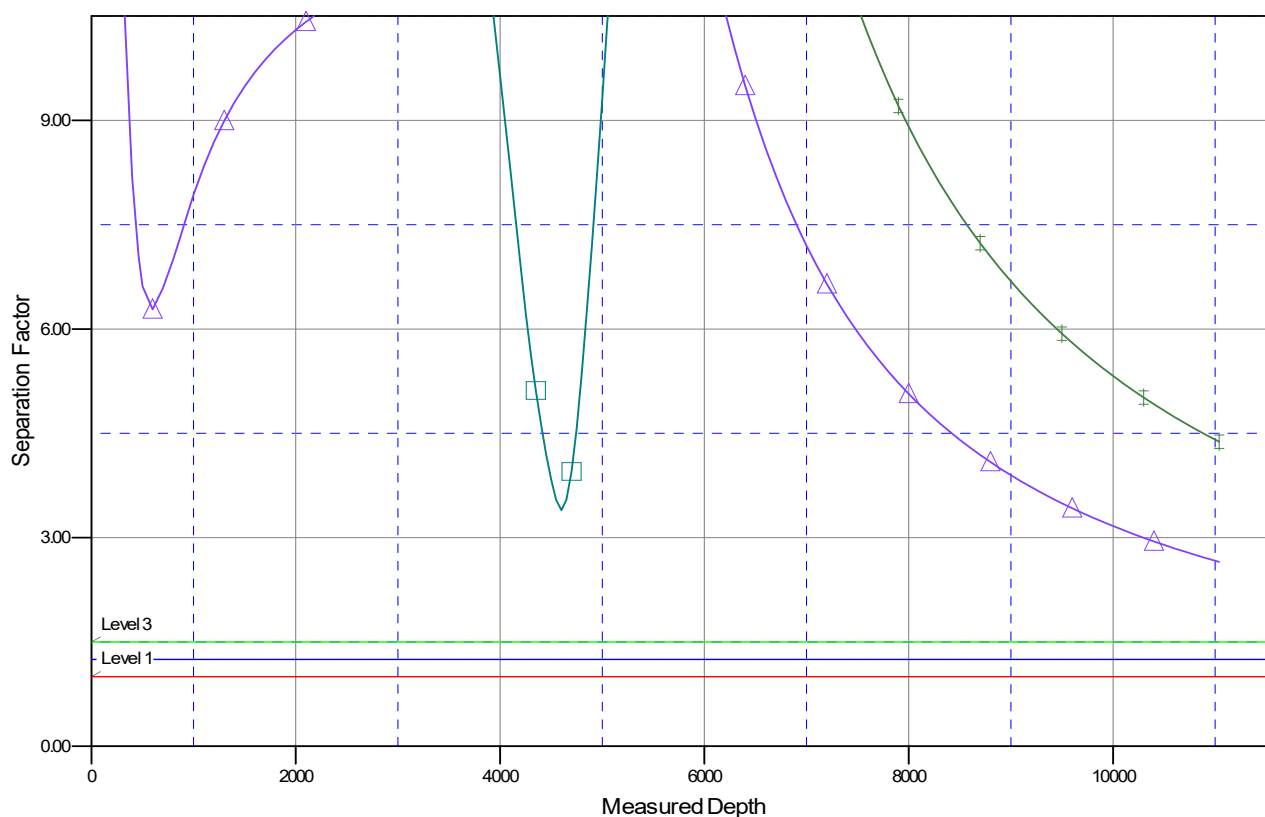
Central Meridian is -107.8333333

Coordinates are relative to: # 514H - Slot 3

Coordinate System is US State Plane 1983, New Mexico Western Zone

Grid Convergence at Surface is: 0.24°

Separation Factor Plot



LEGEND

Chao 2206 02P227H.OH.OH.VO
 # 101H Original drilling.g.APD.VO
 # 513H Original drilling.g.APD.VO



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Farmington District Office
6251 College Blvd, Suite A
Farmington, New Mexico 87402



In Reply Refer To:
3162.3-1(NMF0110)

DJR Operating LLC
#514H Venado Canyon Unit
Lease: NMNM109385 Unit: NMNM13567A
SH: SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 1, T.22 N., R.6 W.
BH: NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 12, T.22 N., R.6 W.
San Doval County, New Mexico

***Above Data Required on Well Sign**

GENERAL REQUIREMENTS FOR OIL AND GAS OPERATIONS ON FEDERAL AND INDIAN LEASES

The following special requirements apply and are effective when **checked**:

- A. ☒ Note all surface/drilling conditions of approval attached.
- B. ☒ The required wait on cement (WOC) time will be a minimum of 500 psi compressive strength at 60 degrees. Blowout preventor (BOP) nipple-up operations may then be initiated
- C. ☐ Test the surface casing to a minimum of _____ psi for 30 minutes.
- D. ☐ Test all casing strings below the surface casing to .22 psi/ft. of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield burst) for a minimum of 30 minutes.
- E. ☐ Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the Bureau of Land Management, New Mexico State Office, Reservoir Management Group, 301 Dinosaur Trail, Santa Fe, New Mexico 87508.
The effective date of the agreement must be **prior** to any sales.

INTERIOR REGION 7 • UPPER COLORADO BASIN

COLORADO, NEW MEXICO, UTAH, WYOMING

- F. ☒ The use of co-flex hose is authorized contingent upon the following:
1. From the BOP to the choke manifold: the co-flex hose must be hobbled on both ends and saddle to prevent whip.
 2. From the choke manifold to the discharge tank: the co-flex hoses must be as straight as practical, hobbled on both ends and anchored to prevent whip.
 3. The co-flex hose pressure rating must be at least commensurate with approved BOPE.

I. GENERAL

- A. Full compliance with all applicable laws, regulations, and Onshore Orders, with the approved Permit to drill, and with the approved Surface Use and Operations Plan is required. Lessees and/or operators are fully accountable for the actions of their contractors and subcontractors. Failure to comply with these requirements and the filing of required reports will result in strict enforcement pursuant to 43 CFR 3163.1 or 3163.2.
- B. Each well shall have a well sign in legible condition from spud date to final abandonment. The sign should show the operator's name, lease serial number, or unit name, well number, location of the well, and whether lease is Tribal or Allotted, (See 43 CFR 3162.6(b)).
- C. A complete copy of the approved Application for Permit to Drill, along with any conditions of approval, shall be available to authorized personnel at the drill site whenever active drilling operations are under way.
- E. As soon as practical, notice is required of all blowouts, fires and accidents involving life-threatening injuries or loss of life. (See NTL-3A).
- F. Prior approval by the BLM-Authorized Office (Drilling and Production Section) is required for variance from the approved drilling program and before commencing plugging operations, plug back work casing repair work, corrective cementing operations, or suspending drilling operations indefinitely. Emergency approval may be obtained orally, but such approval is contingent upon filing of a notice of intent (on a Sundry Notice, Form 3160-5) within three business days (original and three copies of Federal leases and an original and four copies on Indian leases). **Any changes to the approved plan or any questions regarding drilling operations should be directed to BLM during regular business hours at 505-564-7600. Emergency program changes after hours should be directed to at Virgil Lucero at 505-793-1836.**
- G. **The Inspection and Enforcement Section (I&E), phone number (505-564-7750) is to be notified at least 24 hours in advance of BOP test, spudding, cementing, or plugging operations so that a BLM representative may witness the operations.**
- H. Unless drilling operations are commenced within two years, approval of the Application for Permit to Drill will expire. A written request for a two years extension may be granted if submitted prior to expiration.
- I. From the time drilling operations are initiated and until drilling operations are completed, a member of the drilling crew or the tool pusher shall maintain rig surveillance at all time, unless the well is secured with blowout preventers or cement plugs.

- J. If for any reason, drilling operations are suspended for more than 90 days, a written notice must be provided to this office outlining your plans for this well.

II. REPORTING REQUIREMENTS

A. For reporting purposes, all well Sundry notices, well completion and other well actions shall be referenced by the appropriate lease, communitization agreement and/or unit agreement numbers.

B. The following reports shall be filed with the BLM-Authorized Officer within 30 days after the work is completed.

1. Original and three copies on Federal and an Original and five copies on Indian leases of Sundry Notice (Form 3150-5), giving complete information concerning.

- a. Setting of each string of casing. Show size and depth of hole, grade and weight of casing, depth set, depth of any and all cementing tools that are used, amount (in cubic feet) and types of cement used, whether cement circulated to surface and all cement tops in the casing annulus, casing test method and results, and the date work was done. Show spud date on first report submitted.
 - b. Intervals tested, perforated (include; size, number and location of perforations), acidized, or fractured; and results obtained. Provide date work was done on well completion report and completion sundry notice.
 - c. Subsequent Report of Abandonment, show the manner in which the well was plugged, including depths where casing was cut and pulled, intervals (by depths) where cement plugs were replaced, and dates of the operations.
2. Well Completion Report (Form 3160-4) will be submitted with 30 days after well has been completed.
- a. Initial Bottom Hole Pressure (BHP) for the producing formations. Show the BHP on the completion report. The pressure may be: 1) measured with a bottom hole bomb, or; 2) calculated based on shut in surface pressures (minimum seven day buildup) and fluid level shot.

3. Submit a cement evaluation log, if cement is not circulated to surface.

III. DRILLER'S LOG

The following shall be entered in the daily driller's log: 1) Blowout preventer pressures tests, including test pressures and results. 2) Blowout preventer tests for proper functioning, 3) Blowout prevention drills conducted, 4) Casing run, including size, grade, weight, and depth set, 5) How pipe was cemented, including amount of cement, type, whether cement circulated to surface, location of cementing tools, etc., 6) Waiting on cement time for each casing string, 7) Casing pressure tests after cementing, including test pressure and results and 8) Estimated amounts of oil and gas recovered and/or produced during drill stem test.

IV. GAS FLARING

Gas produced from this well may not be vented or flared beyond an initial, authorized test period of *** 30** Days or 50 MMCF following its (completion)(recompletion), whichever first occurs, without the prior, written approval of the authorized officer. Should gas be vented or flared without approval beyond the test period authorized above, you may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted. You shall be required to compensate the lessor for the portion of the gas vented or flared without approval which is determined to have been avoidably lost.

***30** days, unless a longer test period is specifically approved by the authorized officer. The 30-day period will commence upon the first gas to surface.

V. SAFETY

- A. All rig heating stoves are to be of the explosion-proof type.
- B. Rig safety lines are to be installed.
- C. Hard hats and other Personal Protective Equipment (PPE) must be utilized.

VI. CHANGE OF PLANS OR ABANDONMENT

- A. Any changes of plans required in order to mitigate unanticipated conditions encountered during drilling operations, will require approval as set forth in Section 1.F.
- B. If the well is dry, it is to be plugged in accordance with 43 CFR 3162.3-4, approval of the proposed plugging program is required as set forth in Section 1.F. The report should show the total depth reached, the reason for plugging, and the proposed intervals, by depths, where cement plugs are to be placed, type of plugging mud, etc. A Subsequent Report of Abandonment is required as set forth in Section II.B.1c.
- C. Unless a well has been properly cased and cemented, or properly plugged, the drilling rig must not be moved from the drill site without prior approval from the BLM-Authorized Officer.

VII. PHONE NUMBERS

- A. For BOPE tests, cementing, and plugging operations the phone number is 505-564-7750 and must be called 24 hours in advance in order that a BLM representative may witness the operations.
- B. Emergency program changes after hours contact:

Virgil Lucero (505) 793-1836
BLM 24 Hour Number (505) 564-7750

District I

1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 148659

CONDITIONS

Operator: DJR OPERATING, LLC 1 Road 3263 Aztec, NM 87410	OGRID: 371838
	Action Number: 148659
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Notify OCD 24 hours prior to casing & cement	10/7/2022
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	10/7/2022
kpickford	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	10/7/2022
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	10/7/2022
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	10/7/2022